

EUROCORR 2018
Young Scientist Grant Winners p.6

EFC Awards p.8

Member Society and Affiliate
Member News and Profiles p.14



EUROCORR 2019
SEVILLE 9 - 13 SEPTEMBER 2019

DC Voltage Gradient Technology And Supply Ltd.



PROCOMETER

POTENTIOSTAT



- Non-destructive Testing of the corrosion protection provided by coatings on metal substrates. Examples of uses are on bridges, Tanks, Exposed Pipelines, Ships, Aeroplanes, Metal Monuments, Museum Artefacts and any other metal coated substrates.
- Used for quality testing metal substrates that have had a coating applied recently.
- Gives you an idea of how many years the coating will last.

- Can be used as a standalone Potentiostat and in conjunction with the ProCoMeter to perform additional measurements.
- The Potentiostat utilises a voltage-controlled reference electrode (REF) to maintain the potential of a test specimen. The non-intrusive configuration means a current measurement can be measured through a counter electrode (CE) from a working cell.
- The ProCoMeter can be adjusted to either a fixed potential or a swept test sequence. The fixed Potentiostat mode can be used in conjunction with a DCVG ProCoMeter device SC-Single Cell configuration. The Swept mode sequence can set a starting voltage and ramp to an ending voltage (Voltammetry). Repeat ramp cycles can be set or a reverse cycle mode.



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- Analogue DCVG meter for locating coating faults and determining the corrosion status of the defect.

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A few words from the EFC President

To all the members of the European Federation of Corrosion

EUROCORR is the flagship event of the European Federation of Corrosion. For the first time Poland hosts the EFC's annual conference, the most renowned corrosion event in Europe. The Polish Corrosion Society has chosen a wonderful city Krakow, with much historical and cultural heritage, and a modern first-class venue, ICE Krakow Congress Centre which is among Europe's most popular congress centres. Many thanks to our Polish hosts and particularly to Agnieszka Krolikowska, President of the Congress and her team.

EUROCORR 2018 is a great challenge and a fine opportunity to establish an interactive platform providing scientific and technological knowledge, exchanges, cooperation and collaboration. One must remember that the EFC is a society of societies, and I would like to express my gratitude to the European and

International Member Societies as well as to the Affiliate Members. They provide the basis and the support of the Federation. The dynamic and powerful mix of science and technology within our Federation is of significant benefit to these Member Societies and to you as a personal member of your national corrosion society. Of course, many other services are provided by EFC, including reduced fees to the EFC congress and its workshops and discount rates for EFC publications.

EFC knows that the world is changing and must follow these developments by adapting our administration. This has been done in 2017 with the deposit and formalisation of our new statutes in Belgium, where we are registered as an "AISBL" (Association Internationale Sans But Lucratif – international non-profit association) for VAT. Many thanks to Julija Bugajeva, Honorary Treasurer, and H  l  ne Illaire, Managing Officer, who did a lot to quickly resolve these affairs. EFC is now ready to expand its horizons with the formation of branches in and beyond the confines of Europe. International non-profit associations, companies and research organisations/universities are welcome to join the Federation as International Members or Affiliate Members.

The heart of EFC beats strongly due to its many active volunteers. I would like to thank the chairpersons of the twenty-one active EFC Working Parties (WPs) who have been involved in the scientific preparation of the congress. I would also like to welcome the new Working Party on "Corrosion Reliability of Electronics" and Prof. Rajan Ambat who chairs this WP 23. Today electronic devices and control systems are exposed to all climatic conditions from clean room to severe offshore conditions, hence WP 23 will have a lot of work in the near future to connect with those involved in the reliability of these devices. The EFC Working Parties form the backbone of the Federation, being responsible of the scientific and technical works. My encouragement and thanks go to Wolfram F  rbeth, Chairman of the EFC Science and Technology Advisory Committee, and to Roman Bender, EFC Scientific Secretary, who coordinate the WP activities, including those needed for EUROCORRs.

The "Young EFC" network (YEFC) is also contributing a lot to this year's EUROCORR with dynamism, motivation and talent. These new initiatives, together with the EUROCORR Young Scientist Grant, provide strengthening of EFC in the European corrosion community. Many thanks to the YEFC board (Yaiza Gonzales-Garcia, Marta Mohedano, Michele Fridel, Cem   rnek and Christofer Leygraf). If you think that network, communication, innovation and learning are key factors for a successful career, then do not hesitate to join YEFC (no fees are required if you are member of one of our Member Societies).

I would like also to express my gratitude to the EFC Past-President (Prof. F  tima Montemor) and to the EFC Vice-President (Prof. Arjan Mol) for their availability and support. My appreciation also goes to the EFC secretariat in Paris (Pascale Bridou Buffet), London (Julija Bugajeva) and Frankfurt (Ines Honndorf and Christiane Hirsch) for handling day-to-day EFC issues and their high professional level.

I cannot finish this letter without sending my most sincere thanks to Douglas Mills and Ruth Bingham, respectively Editor and Assistant Editor of this EFC Newsletter. The typesetting, layout and publication have been done this year by "Nouvelle page communication" which gives free copies of this EFC Newsletter to EUROCORR participants in exchange for some advertising inside. We would appreciate your feedback regarding this new presentation of the EFC Newsletter. Your opinion interests us strongly.

I look forward to meeting you in Krakow. I wish you an interesting time when reading the present EFC Newsletter and even more of an interesting time during EUROCORR 2018.



Professor Damien F  ron
11th EFC President (2017-2018)

Professor Damien F  ron



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*Seville will become
the capital of
corrosion in 2019,
with the EFC's
annual congress*

EUROCORR,
*Europe's most
renowned corrosion
event, taking place
there from 9th to
13th September 2019.*

EUROCORR 2019 SEVILLE, SPAIN, 9-13 September 2019

The organisers, the **Spanish Materials Society (SOCIEMAT)** together with the **European Federation of Corrosion (EFC)** and **DECHEMA**, are pleased to invite you to participate in the Congress, which will offer a precious networking opportunity for scientists, representatives of research institutions, universities, industry and graduate students in a vibrant professional context and atmosphere under the motto **"New times, new materials, new corrosion challenges"**.

The scientific programme will consist of a range of plenary lectures by world-renowned corrosion specialists, including topical keynote lectures, around six hundred oral presentations and poster presentations. Up to thirty sessions on a variety of topics will offer corrosionists from all over the world the opportunity to meet and present their research.

The Congress will be held in Seville, a city open to the past, living in the present and prepared for the future, a place of meeting, tolerance and sharing.

Few other Spanish cities can boast of such a cultural and artistic heritage, interesting monuments and charming places as the Andalusian city crossed by the river Guadalquivir, such as the Cathedral, the largest gothic temple of Christianity in the world; the Reales Alcázares palace, jewel of Sevillian Mudejar architecture, and the Archivo General de Indias (General Archive of the Indies), home to the documents related to the discovery and conquest of the New World.

The Congress venue, the Barceló Sevilla Renacimiento is well-known in the city for its architecture and design that evokes the Guggenheim Museum in New York, capturing the interest of the visitor at first sight. Located on the banks of the Guadalquivir River, a short walk from the Alameda de Hércules, famous for its bars and restaurants, and just a few minutes from all the historic sites of interest.

A rich social programme has been carefully prepared to enhance further the exchange between congress participants while enjoying the wonderful surroundings.



Topics:

- Corrosion and Scale Inhibition (WP1)
- Corrosion by Hot Gases and Combustion Products (WP3)
- Nuclear Corrosion (WP4)
- Environment Sensitive Fracture (WP5)
- Corrosion Mechanisms, Electrochemical Methods in Corrosion Research and Modelling of Corrosion Processes (WP6 & WP8)
- Corrosion Education (WP7)
- Marine Corrosion (WP9)
- Microbial Corrosion (WP10)
- Corrosion of Steel in Concrete (WP11)
- Corrosion in Oil and Gas Production (WP13)
- Coatings (WP14)
- Corrosion in Refinery and Petrochemistry (WP15)
- Cathodic Protection (WP16)
- Automotive Corrosion (WP17)
- Tribo-Corrosion (WP18)
- Corrosion of Polymer Materials (WP19)
- Corrosion and Corrosion Protection of Drinking Water Systems (WP20)
- Corrosion of Archaeological and Historical Artefacts (WP21)
- Corrosion Control in Aerospace (WP22)
- Corrosion Reliability of Electronics (WP23)
- CO₂ -Corrosion in CCS Applications (TF CO₂)
- Atmospheric Corrosion (TF)
- Advances in New Corrosion Protection Methods



Seville Cathedral Santa María de la Sede

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Key Dates :

- ✓ Submission of abstracts : **16 January 2019**
- ✓ Notification of acceptance to authors : **30 April 2019**
- ✓ Submission of full manuscripts : **18 June 2019**



Organised by:

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DECHEMA

EUROCORR 2018 YOUNG SCIENTIST GRANT WINNERS

Further information on the EUROCORR Young Scientist Grant can be found on the EFC website under the pages "EFC Awards", including the Rules of the grant: flash the QR code for direct access or follow the link.

<http://efcweb.org/YSG>



The EUROCORR Young Scientist Grant will be awarded for the third time at EUROCORR 2018 in Krakow.

The objective of this grant, introduced by the EFC in 2016, is to stimulate interaction and collaboration within the international corrosion community, by providing financial support to young corrosionists to enable them to visit institutions abroad, where they can work and interact with fellow corrosionists.

Each year a maximum of three EUROCORR Young Scientist Grants, up to a maximum of €1,500 each, are awarded.

This year, the recipients of the grants will be :

■ **Mrs. Darya Rudomilova**, University of Chemistry and Technology Prague (Czech Republic), will visit Dr Michael Rohwerder, Max-Planck-Institut für Eisenforschung, Düsseldorf (Germany) to work on «Hydrogen detection in view of high strength steel microstructure via scanning Kelvin probe force microscopy (SKPFM) measurements».

■ **Mr. Paul Johan Denissen**, Delft University of Technology (the Netherlands), will visit Dr Polina Volovitch, Chimie Paris Tech (France) to work on «Towards the understanding of inhibitor release and synergies from coatings for long-term protection by Local Electrochemical Impedance Mapping».

■ **Mr. Leonardo Iannucci**, Politecnico di Torino (Italy), will visit Dr. Régine Bassèguy, CNRS, Toulouse (France) to work on «Assessment of microbial corrosion in marine and hypersaline environment».

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Corrosion damage still causes major economic losses throughout the economy. Firstly, through costly repair measures, and secondly through production losses. Corrosion protection with paints and coatings is the right solution.

The use of paint and coating systems is increasing more and more, as the demand is steadily growing. Moreover, there is more than one example on how to protect steel and steel constructions.

Science is constantly looking for better materials for corrosion protection or better coating techniques. The need of support of qualified and good educated staff taking care of monitoring and treatment is a part of the whole system. For the implementation and administration of education for inspectors being responsible for corrosion protection, **a person certification** can be the best solution.

About 600 paint and coating inspectors have already successfully passed the exam and have received the sought-after DIN CERTCO certificate. Together with our training partners, we offer the next trainings as follows:

- Austria:**
- Vienna, from 2018 October 8th until 19th with the exam on October 25th
 - Vienna, from 2019 January 14th until 25th with the exam on February 1st
- Germany:**
- Dresden, from 2018 November 12th until 16th / November 26th until 30th with the exam on December 7th
 - Dresden, from 2019 January 21st until February 1st with the exam on February 8th
 - Dresden, from 2019 November 11th until 15th / November 25th until 29th with the exam on December 5th

For more information, please contact DIN CERTCO via info@dincerto.de



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EUROPEAN CORROSION MEDALLIST PROFESSOR KEMAL NISANCIOLU



Professor Kemal Nisancioglu has been announced as this year's laureate of the European Corrosion Medal.

He is being acknowledged for his comprehensive and valuable contribution to corrosion research together with his long and solid history of leadership driven by a clear vision towards advanced knowledge and alloy development for industrial needs. This has focused on the corrosion of light metals and the effect of trace elements on corrosion and the effect of near-surface deformed layers on susceptibility to filiform corrosion.

The Federation especially recognises his long-lasting and continuing contributions to EUROCORR and the Working Parties on "Surface Science and Mechanisms of Corrosion and Protection" and "Corrosion Education", his strong impact on higher education and industry, and his clear willingness to share his knowledge with the Corrosion Community nationally, within Europe, and on a global scale.

His work within corrosion covers a range of topics, including cathodic protection, corrosion inhibitors, protective coatings and conversion coatings, with a particular focus on the corrosion of light metals (aluminium and magnesium alloys) including their surface treatment; correlations between electrochemical behaviour, microstructure, and corrosion and effect of alloying and thermomechanical processing during fabrication. He has also used advanced micro-analytical techniques such as SEM, TEM, X-ray EDS, Auger spectroscopy, XPS, and GDOES to study corroded and electrochemically treated surfaces.

Kemal Nisancioglu obtained his B.Sc. degree (1968) in Chemical Engineering from the Massachusetts Institute of Technology and his MSc degree (1969) and Doctoral degree (1973) in Chemical Engineering from the University of California at Berkeley, USA. Between 1968 and 1986, he held various research and industrial positions in the USA, Norway and Turkey. In 1986 he was appointed professor at the Department of Materials Science and Engineering at the Norwegian University of Science and Technology (NTNU), teaching undergraduate and graduate level courses in Corrosion and Surface Technology, Electrochemical Engineering and Transport Phenomena.

In addition to his scientific work, Professor Nisancioglu has served in a number of organisations to advance the sound application of corrosion science and technology, including the International Corrosion Council, European Federation of Corrosion, the Federation of European Chemical Societies, the European Federation of Chemical Engineering, the International Society of Electrochemistry, The Electrochemical Society, National Association of Corrosion Engineers and The Norwegian Academy of Technological Sciences (NTVA).

In consideration of his global reputation and the quality of research and teaching, he is a very worthy recipient of the European Corrosion Medal.

Professor Kemal Nisancioglu will be awarded his European Corrosion Medal by the EFC President at the opening session of EUROCORR 2018 in Krakow.

AWARDS

CAVALLARO MEDAL LAUREATE PROFESSOR GORDON TIMOTHY BURSTEIN

Tim Burstein is currently a Distinguished Research Fellow in the Department of Materials Science and Metallurgy at the University of Cambridge. He is the author of over 200 scientific publications and holds several patents relating to electrochemical treatments of stainless steels and corrosion inhibition. He was Editor-in-Chief of Corrosion Science for nearly 20 years, and under his stewardship the journal's impact factor increased from less than one to greater than five. He co-edited the 3rd Edition of "Corrosion" along with L. L. Shreir and R. A. Jarman. He has received multiple awards in electrochemistry and corrosion, including the U. R. Evans Award of the Institute of Corrosion, the H. H. Uhlig Award of the Electrochemical Society and the Lee Hsun Award of the Chinese Academy of Sciences.

Tim Burstein's research has focused on the corrosion of metals, including the development of novel electrochemical techniques for the study of corrosion mechanisms, particularly pitting. He has also applied his knowledge to the development of low-cost fuel cell systems, and to the electrochemical processing of metals, corrosion resistance being a critical requirement in both cases.

In each of these areas he has made an outstanding contribution over a prolonged period. Throughout his career, Tim has consistently developed new electrochemical methods to examine and quantify hitherto inaccessible corrosion processes, e.g. the scratch and guillotine techniques for the study of freshly generated, hence unambiguously 'bare', metal surfaces. His most widely cited work is on the pitting corrosion of stainless steels. His research in this area focused on the very early stages of pitting on the nano-scale, making extensive use of microelectrodes to enable the study of individual pits, both in terms of their physical shape and the anodic current transients generated by their propagation under potential control. He followed this up by looking at even earlier stages of the corrosion process, 'pit nucleation', requiring current measurements at the picoamp level. Altogether, he is a very worthy recipient of the Cavallaro Medal.

Professor Gordon Timothy Burstein will be awarded his **Cavallaro Medal** by the EFC President at the opening session of EUROCORR 2018 in Krakow.





HONORARY FELLOW OF THE EFC DON HARROP

After a long and successful career with BP, Don Harrop is now Director of his own independent consultancy company, CorroDon Consulting Ltd. He has also been Visiting Professor at the School of Materials at the University of Manchester (2012 – 2015), where his field of research/activity was corrosion management in upstream oil and gas applications. Four major achievements have been the development of an electrochemical process for the deposition of alumina films, the application of potentiostatic and galvanostatic approaches to the study of corrosion in reinforcing steels embedded in concrete, development of an electrochemical approach for assessing pitting and stress corrosion cracking susceptibility of a range of materials used in reactor vessels and pipework, and industry-leading test facilities and methodologies for testing and selecting oilfield corrosion inhibitors.

Don has demonstrated an outstanding commitment to the activities of the EFC over a period of 30 years. In 1991 he was a driving force behind the creation of Working Party 13 (Corrosion in Oil and Gas Production) and has remained an active member ever since. He served on the Board of Administrators from 1999 until 2014 and has been an elected member of the STAC since 2008. He served as EFC President for two years (2002/03), during which time his major achievement was the historic signing of a cooperation agreement between the EFC and NACE. Don made a significant contribution to the re-drafting of the EFC statutes and by-laws in 2006/07 and served as Vice President of the World Corrosion Organization (WCO) as EFC nominee in 2011. He chaired an EFC Task Force on Exhibitions in 2013/14 and was a member of an EFC Task Force on Awards from 2015 - 2017. He also served on the jury for the European Corrosion Medal from 2015 - 2017. Throughout this time Don has shown full commitment to the ethos and objectives of the EFC, in particular by fostering a spirit of broader collaboration with other organisations. He has delivered significant benefit and impact to the EFC in a wide range of roles and is a very worthy recipient of an Honorary Fellowship.

Don Harrop will be awarded Honorary Fellowship by the EFC President at the opening session of EUROCORR 2018 in Krakow.

KURT SCHWABE PRIZE AWARDEE 2018 DR. ANDREA QUAINI

*Thanks to the Hungarian Corrosion Society and to the Jury members, the **2018 Kurt Schwabe Prize** is awarded this year to **Dr. Andrea Quaini**.*

Andrea is a young scientist, born in 1987, who has already made significant contributions to the understanding of corrosion in extreme environments. During his PhD thesis, he not only originated excellent tools and procedures based on thermodynamics, but also developed and demonstrated comprehensive mechanisms of the interaction between corium and concrete. Specifically he contributed to the thermodynamic modelling of the U-O-Zr ternary system, particularly the liquid phase that is characterised by the presence of a miscibility gap. He also focused on the high temperature behaviour of the $\text{PuO}_2\text{-UO}_2\text{-ZrO}_2$ system, which is of interest in the first steps of a severe accident in a pressurised water reactor charged with MOx fuel.

Andrea Quaini has a relevant European education path, with studies up to the Master's degree level in Italy (Politecnico di Milano), traineeship in Germany (JRC-Karlsruhe) and PhD in France (INP Grenoble and CEA Saclay). During his short career he has made a significant contribution to the understanding of these complicated chemical systems that can form in nuclear reactors and interact with core metals and the reactor concrete during core melt-down. He also developed a very useful device for measuring the emissivity of oxidized materials such as stainless steels at temperatures up to 800°C, making it possible to monitor the oxidation of such materials in various environments. For his major contributions to corrosion science and thermodynamics, he already received two major honours: The Don Bartolomeo Grazioli Martire di Belfiore Award for the best MSc thesis in physical science at the Science Academy of Milan, Italy (2013), and the Spriggs Phase Equilibria Award from the American Ceramic Society (2016). We wish a long and successful career to this young and talented European engineer-researcher.

Dr. Andrea Quaini will be awarded the Kurt Schwabe Prize at the opening session of EUROCORR 2018 in Krakow.





OBITUARY

PROF. DR. MUSTAFA DORUK

Professor Mustafa Doruk, the leader of the corrosion community in Turkey, passed away on July 2, 2017 in Ankara, Turkey. Born in 1932 at Karatay, Konya, central Anatolia, Turkey, he attended vocational school and, after very hard work, he was accepted at Yildiz Engineering School, presently Yildiz Technical University, where he received his Mechanical Engineering degree in 1953. From the Technische Hochschule Darmstadt, Germany, he received his Dipl.-Ing. degree in Mechanical Engineering in 1956 and his Dr.-Ing. degree in Materials Science in 1961.

He joined the newly founded Middle East Technical University (METU) in 1963, as assistant professor initially in the Mechanical Engineering Department and later at the Department of Metallurgical Engineering, which he helped to establish. In 1976, he was promoted to full Professor. He spent 18 months at the Materials Department of the University of California at Los Angeles, California, USA, as United Nations Scholar between 1972 and 1973. He was also visiting Professor at the Technische Hochschule Darmstadt, Darmstadt, Germany in 1979.

He was an able administrator, serving as Chairman of the Department of Metallurgical Engineering (1965-1969), Dean of Faculty of Engineering (1978-1985) and Chairman of the Department of Metallurgical and Materials Engineering (1988-1997). He was very successful in dealing with colleagues as well as his students. His calmness always impressed people. He led people without pushing but with determined authority. He was Honorary Senator of the Technical University Darmstadt (TUD), Germany (granted on 19 November 1999).

He carried out research into structures and structural instabilities in austenitic chromium-nickel stainless steels, fracture mechanics, structure and mechanical properties of composites, creep and creep rupture and environmental cracking (particularly stress corrosion cracking, and corrosion fatigue). He published two books on corrosion and several papers in international journals.

He was the leader of the founding members of The Corrosion Association in Turkey (1987) and longtime Editor of the Association's Journal "KORROSION". His leadership ensured the success of the Association's activities. He was member of the Chamber of Turkish Metallurgical Engineers, Structure and Materials Panel of NATO/AGARD (1981-1994), International Congress of Fracture (ICF) and International Congress on Corrosion (ICC) (1990-2002).

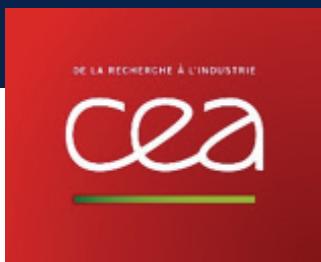
He will be missed by all people who had a chance to meet him even once. He is survived by two sons.



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Winter School “ **Modelling of Corrosion** ” INSTN CEA-Saclay, January 28 - February 1st, 2019

This 4th School on Modelling of Corrosion includes courses in the morning and computer sessions in the afternoon. Topics: Atomistic and molecular modelling of corrosion; Modelling of corrosion by cellular automata; Point defect Model and DPCM model for passive layers; Corrosion data mining & neuronal networks; Modelling of (i) high temperature oxidation, (ii) localized corrosion, (iii) flow accelerated corrosion, (iv) stress corrosion cracking, (v) inter-granular corrosion, (vi) rebar corrosion, (vii) cathodic protection; Corrosion modelling and safety management; multi-scale & multi-physics modelling.



Target: PhD students, engineers and scientists - Event in the EFC list of Courses <http://efcweb.org/Courses.html>

Contact: Alexandra FECTAY alexandra.fectay@uvsq.fr

REGISTRATION ON-LINE: www.mse-chair.org - **REGISTRATION DEADLINE: December 7, 2018**

” Service of corrosion and behaviour of materials in their environment, Cea/Den ”



- Study of corrosion mechanisms
- Conversion, sol-gel and anodizing
- Multifunctional coatings
- Electrochemical characterization
- Ageing tests

Materials Science Department

EUROCORR2020 Organizer - Prof. M. Olivier : 0032 65 37 44 31 - Rue de l'Épargne 56 - 7000 Mons - Belgium



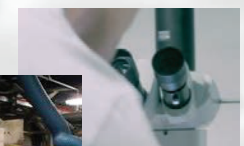
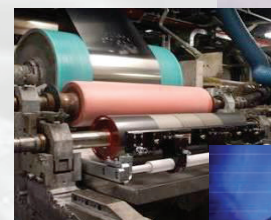
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MEMBER SOCIETY MEMBER NEWS



**ASSOCIAZIONE
ITALIANA
DI METALLURGIA**

**ITALIAN ASSOCIATION
OF METALLURGY (AIM)**



(GIORNATE NAZIONALI SULLA CORROSIONE E PROTEZIONE)

**NATIONAL DAYS ON
CORROSION AND
PROTECTION**

The XIII edition of the National Days on Corrosion and Protection (Giornate Nazionali sulla Corrosione e Protezione) will take place at the University of Palermo from 3rd to 5th July 2019.

This event is the national benchmark for scientific, technological and production issues in the field of corrosion and protection of materials. In particular, the results achieved by various study groups and companies in the sector are presented in oral and poster form during the convention. The conference will start on the Wednesday afternoon with the opening ceremony and two plenary lectures, followed by two days of technical sessions. The Conference Dinner will be offered on the evening of Friday 5th July.

Website : <http://www.metallurgia-italiana.net/eng/>



**NEWS FROM THE
AUSTRALASIAN
CORROSION ASSOCIATION INC.**

**Corrosion & Prevention 2018
11-14 NOVEMBER 2018,
ADELAIDE CONVENTION CENTRE,
SOUTH AUSTRALIA**

In 2018, the Australasian Corrosion Association (ACA) will host the annual ACA conference in Adelaide at the newly refurbished Adelaide Convention Centre.

The annual ACA conference is a 3-day gathering of world experts on corrosion mitigation.

This will be a premium networking event as well as a source for the latest information concerning corrosion mitigation. Entitled Corrosion & Prevention 2018, the conference will comprise a program of keynote speakers and presentations under a range of industry 'streams', integrated with an exhibition that will showcase the latest products and services of the corrosion mitigation industry.

Over 500 delegates and visitors are expected to attend from industries such as protective coatings, maritime, water, mining, oil and gas, building and



AND AFFILIATE AND PROFILES

construction, cathodic protection, cultural and historical materials preservation, power generation, asset management, food processing and defence.

The conference will bring together leading researchers and industry practitioners who combat corrosion daily. An extensive exhibition of key industry suppliers will also run in conjunction with the conference. As always, C&P2018 will be a source for the latest information concerning corrosion prevention, control and repair, in addition to being a premium networking event.

Substantially reducing both direct and indirect corrosion costs requires more than just technology; it requires integrating corrosion management policies and procedures into the overall management system of an organisation. To this end, diverse technical streams will showcase the latest developments in the field, ranging from fundamental corrosion science to hands-on application.

Adelaide is conveniently located one hour from the Barossa Valley, South Australia's most famous and beautiful wine-producing region. Other renowned sight-seeing areas worth a visit include the Flinders Ranges and the peaceful and scenic Kangaroo Island.

Adelaide also provides world-class meeting infrastructure and accommodation options, with easy accessibility between the airport, conference facilities and the city centre. It is a safe and stable destination for international visitors and locals alike.

For the details on the 2018 Plenary Speakers, full Technical Program, Exhibitors, Social function and the Partner Program, visit the conference website: www.conference.corrosion.com.au



Adelaide Convention Centre



Wine Barrels



Under the Grange Jetty (SA key imagery)

POLISH CORROSION SOCIETY (PSK)

As this year's EUROCORR host, the Polish Corrosion Society (PSK) would like you to get to know us better. We are an organization of institutions and individual members dealing with corrosion protection in terms of research, production, supplies and application methods.

The PSK includes people of numerous professions (investors, designers, contractors, manufacturers, inspectors and scientific), providing an important platform for mutual understanding.

The PSK is a member of the European Federation of Corrosion (EFC) and the World Corrosion Organization (WCO) and is therefore part of the international community dealing with corrosion and its impact on civilization issues. PSK president Dr Agnieszka Królikowska is a member of the EFC Board of Administration (BoA). The PSK participates in EFC activities by taking part in the EFC working party "Coatings" to promote and disseminate knowledge. The Polish corrosion journal "Ochrona przed Korozją" ("Corrosion Protection") regularly publishes information about the EFC and its activities and it is listed among the EFC journals. This year's EUROCORR Congress is organized by the PSK.



**POLSKIE
STOWARZYSZENIE
KOROZYJNE**

Our key objective is to promote new measures and technologies of anticorrosion protection, which we do during annual conferences, as well as providing patronage of national and international conferences organized in Poland and actively participating in other conferences and themed exhibitions at home and abroad. Also The PSK organizes seminars and presentations covering recent EU regulations and particularly elaborating various procedures and documents necessary for the activity of Society members. We impact upon the development of corrosion protection techniques by popularizing, publishing, providing expertise and by professional training for employees, as well as organizing knowledge transfer relating to application and deployment of new corrosion protection methods. Examples of our professional training activities include paint application courses for equipment operators, e.g. ultra-high-pressure jetting (UHP), and practical courses on measurement techniques for inspectors. PSK members deliver lectures during the three-step course "Designing and supervising anticorrosion works on steel bridge structures" that has been organized since 1998 by the Road and Bridge Research Institute, and during a similar two-step course on anticorrosion protection of concrete structures. These take place as part of Postgraduate Studies "Paint and varnishes – technology and application" and during FROSIO inspector courses. The PSK also accredits anticorrosion inspectors and experts.

The following Working Groups function at PSK:

- The Normalization Working Group takes active part in the works of the Polish Committee for Standardization (PKN); it reviews standards so that those which do not meet current technical requirements are withdrawn; it also provides opinions on all standards projects of the Standardization Committees for Corrosion and Corrosion Protection of Metal Materials and for Paints and Varnishes.
- The PSK Procedures Working Group develops procedures for evaluating coatings quality in practice, which is essential for anticorrosion activities but not included in the current standards and technical recommendations.
- The Railway Working Group deals with improving the condition and corrosion protection of railway rolling stock.
- The Flame Protection Working Group deals with verification of standards and preparation of guidelines in reactive coating applications on steel structures. In case of need, new Groups are created; they may be permanent or temporary and concentrated on one objective.

The PSK also nurtures the R&D potential of every PSK member, covering the wide spectrum of knowledge about materials, their protection and marketing potential, in order to disseminate knowledge about research results and their practical implementation. The PSK has been involved in the realization of three scientific CORNET projects: "Cost-effective biopolymer interior coatings (BioCoat)", "Criteria and guidelines for evaluation and selection of paint anticorrosive systems for steel structures (DuraCoat)" and "New generation of Zn primers with improved anticorrosion, application and ecological properties (ZincPower)". The conception of developing a new generation of primers with a reduced content of zinc led to the award of the bronze medal at the International Invention and Innovation Show (INTARG) 2018. In each of the realized projects, the most important goals are to integrate our members, raise corrosion awareness of the society and the governments, and to take care of quality in corrosion protection and appropriate use of new materials and technologies.

Member engagement is the focus of this year's EUROCORR via content (49 Polish papers and posters; 16 exhibitors), logistic and organizational support. We highly appreciate the support provided by PSK companies for Polish students to participate in EUROCORR. We are open to cooperation with all who care about corrosion.



Equipment and technology presentations



Company collaboration of many years



Collaboration with exhibitors



PSK conference members

EFC MEMBER SOCIETIES AND AFFILIATE MEMBERS

EUROPEAN MEMBER SOCIETIES

AUSTRIA

The Austrian Society of Metallurgy and Materials (ASMET)
E-mail: asmet@asmet.at
Website: www.asmet.at

BELGIUM

VOM vzw - Belgian Association for Surface Treatment
E-mail: v.fincken@vom.be
Website: www.vom.be

CROATIA

Hrvatsko društvo za zaštitu materijala (HDZAMA)
Croatian Society for Materials Protection
E-mail: hdzama@fsb.hr
Website: www.fsb.unizg.hr/hdzama/

CZECH REPUBLIC

Asociace koroznich inzenyru (AKI)
Czech Association of Corrosion Engineers
E-mail: aki@vscht.cz
Website: www.aki-koroze.eu

DENMARK

ATV-SEMAPP
E-mail: lth@force.dk
Website: www.atv-semapp.dk

FRANCE

CEFRACOR - Centre Francais de l'Anticorrosion
French Corrosion Society
E-mail: info@cefracor.org
Website: www.cefracor.org

GERMANY

DECHEMA e.V. - Society for Chemical Engineering and Biotechnology
E-mail: info@dechema.de
Website: www.dechema.de

fkks-Fachverband Kathodischer Korrosionsschutz e.V.
Technical-scientific Association for Cathodic Protection
E-mail: koepf@fkks.de
Website: www.fkks.de

GfKORR - Gesellschaft für Korrosionsschutz e.V. - Society for Corrosion Protection
E-mail: gfkorr@dechema.de
Website: www.gfkorr.de

HUNGARY

Magyar Korróziós Szövetség 'HUNKOR'
Hungarian Corrosion Society
E-mail: fektt@gold.uni-miskolc.hu
Website: www.hunkor.hu

ITALY

Associazione Italiana di Metallurgia (AIM)
Italian Association of Metallurgy
E-mail: aim@aaimnet.it
Website: www.aaimnet.it

Associazione per la Protezione dalle Corrosioni Elettrolitiche - APCE - Association for Protection against Electrolytic Corrosion
E-mail: info@apce.it; alessandro.cigni@apce.it
Website: www.apce.it

The NETHERLANDS

Bond voor Materialenkennis
E-mail: j.m.c.mol@tudelft.nl
Website: www.materialenkennis.nl

NORWAY

Norsk Korrosjonsteknisk Forening (NKF)
Norwegian Corrosion Society
E-mail: torfinn.havn@ztrong.no
Website: www.nkfstavanger.org

POLAND

Polskie Stowarzyszenie Korozyjne (PSK)
Polish Corrosion Society
E-mail: akrolikowska@ibdim.edu.pl
Website: www.psk.org.pl

PORTUGAL

Sociedade Portuguesa de Materiais (SPM) - Portuguese Society for Materials
E-mail: manuela.oliveira2@gmail.com
Website: www.spmateriais.pt

RUSSIA

ANTIKOR - International Scientific & Educational Corrosion Centre
E-mail: muradov@gubkin.ru or antikor@gubkin.ru

SLOVENIA

Inštitut za kovinske materiale in tehnologije (IMT)
Institute of Metals and Technologies p.o.
E-mail: Matjaz.Godec@imt.si
Website: www.imt.si

SPAIN

Sociedad Espanola de Materiales (SOCIEMAT)
E-mail: jdambo@cenim.csic.es
Website: www.sociemat.es

SWEDEN

Swerea KIMAB AB
E-mail: johan.tidblad@swerea.se
Website: www.swereakimab.se

SWITZERLAND

Swiss Society for Surface Technology SGO/SST
E-mail: admin@sgo-sst.ch
Website: www.sgo-sst.ch

TURKEY

Korozyon Dernegi
The Corrosion Association in Turkey
Website: www.korozyondernegi.org.tr

UNITED KINGDOM

The Institute of Corrosion - ICorr Head Office
E-mail: admin@icorr.org
Website: www.icorr.org

The Institute of Materials, Minerals and Mining (IOM3)
E-mail: julija.bugajeva@iom3.org
Website: www.iom3.org

INTERNATIONAL MEMBER SOCIETIES

AUSTRALIA

The Australasian Corrosion Association Inc.
Website: www.corrosion.com.au

CHINA

Chinese Society for Corrosion and Protection (CSCP)
Website: www.cscp.org.cn

EUROPE/USA

NACE International (European Area)
Website: www.nace.org

A full listing of our European and International EFC Member Societies and Affiliate Members can be found on the EFC website at :

Member Societies :

<http://www.efcweb.org/Who we are/Member Societies>



Affiliate Members :

<http://www.efcweb.org/Who we are/Affiliate Members>



AFFILIATE MEMBERS

UNIVERSITIES AND RESEARCH ORGANISATIONS

National Institute for Nuclear Science and Technology (INSTN)
CEA - Centre d'Etudes de Saclay (France)
Website: www-instn.cea.fr

Department of Electrochemistry, Corrosion and Materials Engineering
Technical University of Gdansk (Poland)

COMPANIES

Oerlikon Metco Europe GmbH (Germany)
Website: www.oerlikon.com/metco

STOPAQ B.V. (The Netherlands)

Water Technologies Laboratory Ltd (Russia)

Polyguard (USA)
Website: www.polyguard.com
represented by: Expatech (Belgium)

NEWS FROM EFC WORKING PARTIES AND TASK FORCES

EFC WORKING PARTY 15 : CORROSION IN THE REFINERY AND PETROCHEMISTRY INDUSTRY

WP 15 spring meeting, May 2018

Delegates at the WP 15 spring meeting



The annual spring meeting of the Working Party 15 «Corrosion in the Refinery and Petrochemistry Industry» took place in Dalmine, Italy on 3rd May 2018 and was kindly hosted by Tenaris. The Working Party would like to express its thanks to Tenaris for hosting the spring meeting, with special thanks to Luna Fullen and Giacomo Marcolin for their excellent organisation of the meeting.

The meeting was attended by 40 participants from Europe and Middle East. Exchange of information and discussions took place on

selection of materials for heat exchanger tubes, hydrotreatment units and amine vessels. Failure cases on CDU overheads, coolingwater systems, or due to microbiological induced corrosion were discussed. Another topic was a methodology to evaluate specific degradation mechanisms such as stress relaxation cracking. How to conduct corrosion management when processing so-called opportunity crudes (i.e. potentially useful crudes which need more rigorous desalting to give high-quality products) was debated. Different aspects of corrosion under insulation were discussed in terms of mitigation, detection and monitoring. There was publicity for the activities of the joint WP13-WP15 Task Force which is working on updating EFC publication 46 "Amine unit Corrosion in Refineries".

The next WP 15 meeting will be held during EUROCORR 2018 in Krakow, Poland, on the 11th of September 2018, and will cover the hot topics affecting corrosion in the refinery and petrochemistry industry.

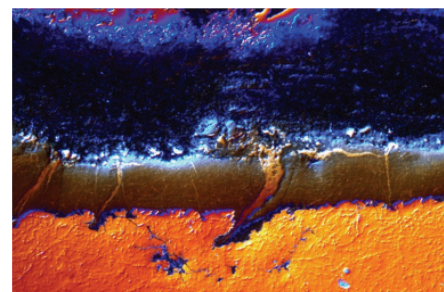
If you wish to have more information on the activities of the group (including all the minutes and presentations of the last meetings) please visit our homepage :<http://efcweb.org/WP15.html>

NEWS FROM THE WORKING PARTY ON CORROSION BY HOT GASES AND COMBUSTION PRODUCTS

EFC WP3 "Corrosion by Hot Gases and Combustion Products" cordially invites you to attend the EFC Workshop 2018: High Temperature Corrosion under Complex Conditions, Deposits and Salts: Towards Greener Energy (EFC Event No. 433), which will be held in Frankfurt am Main, Germany on 26th to 28th September 2018.

The event continues the very successful series of EFC workshops organised over the past two decades by Michael Schütze and Willem (Jo) Quadackers. The workshop will bring together experts and young scientists with research interests in the high temperature corrosion of metallic materials and coatings in existing and emerging applications for greener energy conversion and transportation. The current motivation to reduce CO₂-emissions has driven the worldwide development of new technologies in energy conversion and transportation.

Technologies such as oxy-fuel combustion, waste-incineration and biomass-fired power plants, concentrated solar power (CSP) plants or heat-storage units based on molten salts and ceramic granulate make high demands on materials, calling for new technologies and surface treatment.



The EFC Workshop 2018 addresses these issues by discussing the experimental evaluation of corrosion kinetics, the mechanistic understanding and modelling of corrosion processes and related degradation of material microstructures, and the use of advanced analytical techniques for elucidating complex corrosion phenomena such as those induced by deposits and salts.

Registration: <http://dechema.de/Registration-p-20072295.html>
Website: <http://dechema.de/en/efcws2018.html>

NEWS FROM THE WORKING PARTY ON NUCLEAR CORROSION

EFC – WP4 : Nuclear Corrosion

WP4
Nuclear Corrosion

A little more than 50 years ago Henri Coriou, Head of the “Corrosion Department” at the CEA, was asked by Prof. D. Behrens (Dechema, Germany) to create a Working Party (WP) on “Nuclear Corrosion”. Thereupon WP4 was officially established in 1967 with 12 countries being the founding members: Austria, Belgium, Denmark, France, Germany (Federal R.), Hungary, Italy, The Netherlands, Spain, Sweden, Switzerland, and United Kingdom. This 50 years anniversary was celebrated during EUROCORR/ICC 2017 in Prague with a workshop comprising nine excellent invited talks from renowned experts (see photograph) covering almost the whole range of nuclear corrosion topics.

The WP4 is currently preparing a new “green book” for the EFC Publication Series, based on the contributions to this workshop. It will review the research on most of the nuclear corrosion disciplines, including corrosion issues in nuclear waste disposal and reprocessing systems, environmentally-assisted cracking, microbiological-induced corrosion, Gen IV, etc. The book will be issued mid-2019.

WP4 is now organising the Nuclear Corrosion session for the forthcoming EUROCORR 2018, which will include almost 50 interesting talks and posters. In addition, the next edition of the Nuclear Corrosion Summer School (the first one having been successfully held in 2015) has been organised by WP4 in co-operation with a Horizon 2020 EU project (MEACTOS, www.meactos.eu). The summer school will take place from July 7 until 12, 2019, in Špik, Alpine Resort, Gozd Martuljek, Slovenia. More detailed information



can be seen below and on the website: www.meactos.eu/events/nucoss.

Finally, it may be also mentioned that, this year, the Honorary Medal of the WP4 will be awarded in recognition of outstanding achievements by a scientist, an engineer, or a group of scientists or engineers, in the application of corrosion science in the nuclear field. Last year's recipient was Professor Hannu Hänninen. The five-member jury has selected Dr. Gérard Pinard Legry, France out of the excellent nominations which were received from the WP4 members.

The Coriou Medal will be handed over at the beginning of the WP4 Fall Meeting during EUROCORR 2018 in Krakow (Wednesday, September 12, 2018, 15:00).

Working Party website:
www.efcweb.org/WP4.html

NEW TASK FORCE

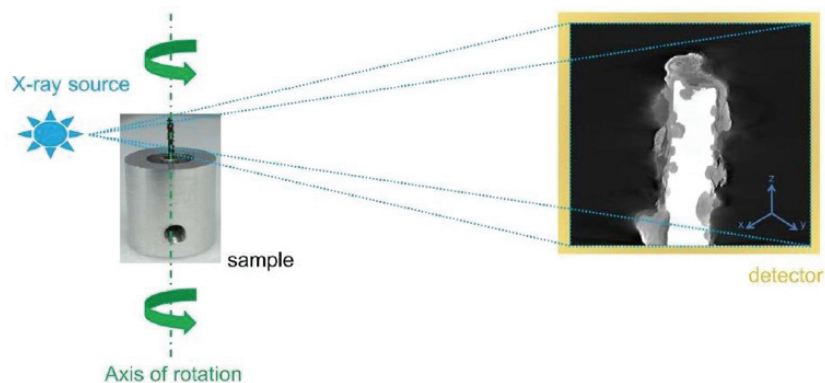
“ATMOSPHERIC CORROSION”

Atmospheric corrosion is characterized by the high complexity of the electrochemical and physical processes taking place in a thin surface electrolyte film with dynamically changing composition and properties. Due to our limited understanding, corrosion engineers and companies have to rely mainly on empirical knowledge when designing and providing corrosion protection of structures and devices exposed to outdoor or indoor atmospheres. To help in the development of advanced cost-efficient corrosion protection solutions, the new Task Force (TF) on Atmospheric Corrosion is fostering collaboration and exchange between academia, with its deep fundamental knowledge and modelling capabilities, and the corrosion protection industry, with its information on the practical needs of end-users.

The work of the TF on Atmospheric Corrosion is focusing on the following fundamental and practical topics: Improving the understanding of corrosion processes in thin electrolytes formed under atmospheric conditions; Development of better predictive models, both statistical and mechanistic; Best practices of field and laboratory testing; Development of corrosion monitoring techniques applicable in atmosphere; Corrosion in new environments, e.g. severe marine industrial atmospheres and micro climate; Protection of novel materials including weathering, stainless and coated carbon steels and aluminium and magnesium alloys; Practical experience in corrosion protection of structures and objects exposed to outdoor and indoor atmospheres; Standardization activities.

At EUROCORR 2018, the TF will organize a two-day session with 22 oral presentations and a number of posters on the Monday and Tuesday. The session will be opened by an invited keynote lecture delivered by Stuart Lyon, AkzoNobel Professor of Corrosion Control, School of Materials, the University of Manchester. Stuart Lyon will give a lecture entitled "Quantitative determination of rust porosity". Despite innumerable years of research on atmospheric corrosion, including many studies on the chemical and phase characterisation of iron oxides, very little is known about the physical structure of atmospheric rust on steel. This paper will give a brief history of rusty steel based on analyses of rust compositions followed by a detailed, quantitative, understanding of the porous structure of rust developed from a cyclic salt-spray test. Subsequent presentations in the Atmospheric Corrosion session will cover many of the topics that the TF has been set up to investigate (see above list). In addition, the TF will co-organize two joint sessions: "Corrosion protection by ZnAlMg coatings in atmospheric conditions" on the Wednesday and Thursday and "Accelerated atmospheric corrosion testing – exchange platform for advanced methods" on the Thursday.

If you consider joining the TF, detailed information and a registration form can be found at: <http://efcweb.org/TF+Atmospheric+Corrosion.html>



NUCLEAR CORROSION SUMMER SCHOOL NUCOSS-19 (EFC EVENT NO. 440)

Corrosion is the most common degradation mechanism in the nuclear industry, which can seriously affect plant availability and economics or even challenge the safety. The summer school is primarily intended for people from nuclear authorities, industry and research organisations who would like to get a comprehensive overview on the field of nuclear corrosion. The programme is designed to facilitate networking and knowledge transfer from seasoned experts to the young generation. This summer school is co-organised by WP4 and the Horizon 2020 EU project MEACTOS.

Internationally renowned experts will give lectures on the following topics :

- Electrochemistry and corrosion
- Overview on corrosion in the nuclear cycle
- Corrosion in light water reactor plants (including a focus on environmentally-assisted cracking)
- Corrosion in nuclear waste disposal systems
- Corrosion in Gen IV systems
- Case studies and ageing management
- Advanced technologies to characterise corrosion

Date : July 7 (late afternoon) to July 12 (morning), 2019

Place : Špik, Alpine Resort, Gozd Martuljek, Slovenia

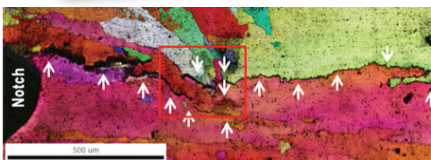
Local organiser :
A. Legat, T. Kosec, and B. Zajec, Slovenian National Building and Civil Engineering Institute (ZAG)

Int. Organising Committee : S. Ritter (PSI), D. Féron & L. Martinelli (CEA), G. Burke & D. Engelberg (University of Manchester-MPC)

Registration opens : December 2018

More information is available on the web : www.meactos.eu/events/nucoss

If you have any questions, please contact the WP4 Chairman or nucoss@zag.si.





RECENT EFC SPONSORED EVENTS

19th YUCORR CONFERENCE

Tara Mountain, Serbia,

12-15 September 2017 (EFC Event No. 424)

The main organizer of YUCORR Conferences is the Serbian Society of Corrosion and Materials Protection (UISKoZaM). This society has existed for over 50 years under various names, but with a single goal – to gather together colleagues from Serbia and the surrounding region devoted to the investigation of materials corrosion and protection. The latest YUCORR, held from 12th to 15th September 2017 at Tara Mountain, Serbia, attracted participants from 11 countries, mostly in Europe, but also from Japan and Algeria.

The conference consisted of five oral sessions and one poster session, with six plenaries, three invited lectures, approximately 20 oral presentations and 25 posters. The plenary lectures were: 'Circular economy and challenges of waste-to-energy processes in the EU' (Filip Kokalj, University of Maribor, Slovenia); 'Hydrophobic surfaces' (Regina Fuchs-Godec, University of Maribor, Slovenia); 'The impact of mining metallurgical copper production in Bor on the environment' (Snežana Šerbula, University of Belgrade, Serbia); 'Properties of Cu-Based Shape Memory Alloys' (Mirko Gojić, University of Zagreb, Croatia); 'Controlled design of geopolymer properties by the modification of microstructure' (Mira Vukčević, University of Montenegro), and 'Stabilisation of Waste Mud from Flotation' (Miladin Gligorić, University of East Sarajevo, Bosnia and Herzegovina).



Participants in MTECH 2018

INTERNATIONAL CONFERENCE ON MATERIALS (MTECH 2017)

Zadar, Croatia, 4-7 October 2017 (EFC Event No. 427)

The first international conference on materials, MTECH 2017, took place in Zadar in Croatia from 4th to 7th October 2017. It was organised by the Croatian Society for Materials Protection, Croatian Society for Materials and Tribology, Croatian Society for Heat Treatment and Surface Engineering and Croatian Centre for Non-destructive Testing. Over 120 participants from Croatia and abroad gathered to disseminate and discuss recent research, innovation and development in the field of corrosion, heat treatment, materials, materials testing and tribology.

Each day opened with a joint plenary session in which renowned scientists and experts, namely J. W. Erning (BAM, Berlin), M. Pavlović (BAM, Berlin), I. Felde (University in Budapest) and R. Basan (University of Rijeka), presented their lectures. This was followed by parallel working sessions covering five themes, namely: the application of corrosion inhibitors for protection of structures in marine environment, the quality assurance of NDT, special features of thermal processing and surface engineering, updates in the field of mechanical properties testing and equipment calibration and the application of metallographic techniques. Among other things, papers and posters were presented by students from the Student Organisation of Materials Engineering (SOME) at the Faculty of Mechanical Engineering and Naval Architecture. An extensive exhibition of companies dealing with materials formed part of the conference framework, significantly contributing to the success of the event and enabling practical exchange of experiences.

The second MTECH international conference will take place in Croatia in 2019.

19th ALL-POLISH CORROSION SYMPOSIUM (APCS)

Jastrzab-Poraj, Poland, 22-24 November 2017 (EFC Event No. 435)

The 19th All-Polish Corrosion Symposium (APCS) took place at the conference and training centre in Jastrzab-Poraj near Czestochowa, Poland, on the 22nd to the 24th November 2017, with over 50 participants from industry and academic institutions taking part. The official languages were Polish and English (without simultaneous translation). During the Symposium, thirty original contributions were presented as talks and posters. The Symposium Proceedings are published in a special issue of Polish Corrosion Protection Monthly (Ochrona przed Korozją (OpK) vol.60, Nr 11, 2017), including seven full papers and thirteen short communications. Further contributions presented during APCS sessions, as yet unpublished due to delayed submission, will appear in subsequent issues of OpK, following peer review.

After the opening session, Robert Filipek (AGH University, Krakow) presented a plenary entitled 'Inverse methods in corrosion research and materials degradation', and Włodzimierz Tylus (Wroclaw University of Technology) presented a plenary on 'X-ray photoelectron spectroscopy in nano-surface studies: use of background lines in modelling of surface morphology'. During general oral sessions, key note lectures were presented by other distinguished Polish professors: Tadeusz Zakroczymski (IPCh PAS, Warsaw), Halina Krawiec (AGH University, Krakow), Alexander Gil (AGH) and Iwona Flis-Kabulska (UKSW, Warsaw). During a special occasional session, the Chair of the Polish Corrosion Society, Dr Agnieszka Krolikowska, described the progress in organising the forthcoming EUROCORR-2018 Congress.

A round table discussion on the 24th November summarized the debates and showed new suggestions and proposals addressed to the organizing committee. The present symposium was regarded as very well organized, with a high scientific level and lively discussion after each presentation.

The social program included two evening events: a welcome reception on the 22nd November and a beer feast on the 23rd November.

A detailed program, along with photographs taken during the event, can be seen on the web site <http://www.symp-kor-apcs.wip.pcz.pl>.



Prof. Erning presents his plenary lecture

THE 23RD INTERNATIONAL CONFERENCE OF MATERIALS PROTECTION AND INDUSTRIAL FINISH KORMAT 2018 Zagreb, Croatia, 25 April 2018 (EFC Event No. 435)

On April 25th 2018, as part of the 27th International Fair of Welding and Corrosion Protection at the Zagreb Fair, the Croatian Society for Materials Protection convened the 23rd International Conference of Materials Protection and Industrial Finish, KORMAT 2018. The conference was dedicated to the memory of Professor Ivan Esih, one of the founders of the Croatian Society for Materials Protection, long-time president and promoter of the corrosion engineering profession in Croatia and abroad. This formed a continuation of the long-term activities of the Croatian Society for Materials Protection in the field of corrosion and corrosion protection education and knowledge transfer among experts at home and abroad.

The conference was attended by 55 participants from industry and academia as well as 65 students from the Faculty of Mechanical Engineering and Naval Architecture, Faculty of Chemical Engineering and Technology and Croatian Military Academy.

The conference consisted of 17 scientific lectures from Croatia, Montenegro, Slovenia, China and Germany. The plenary lecture was held by invited speaker J. W. Erning from the Federal Institute for Materials Research and Testing (BAM) in Berlin. Conference papers were peer-reviewed and published in the Proceedings. The objective of the Conference was to present the latest achievements in the field of corrosion, aluminium and copper alloys, corrosion inhibitors, coatings protection, cathodic protection, corrosion in concrete, and metrology and quality assurance. The conference has again proved to be a platform for connecting scientists and experts from industry, for promoting the profession and for establishing cooperation with domestic and foreign corrosion institutions.



Participants in KORMAT 2018

PREVIEW :

EUROCORR 2020 & 2021



Place : Brussels,
SQUARE Brussels Meeting Center

Date : 6 - 10 September 2020

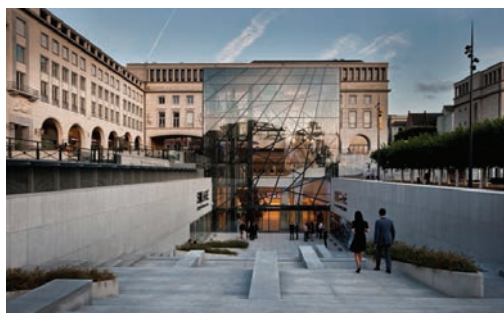
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EUROCORR 2020: Closing the gap between industry and academia in corrosion science and prediction

From the 6th to 10th September, the EFC's annual conference EUROCORR 2020 will take place in Brussels (Belgium). The focus will once again be on the new generation of corrosion engineers, with the young scientists taking the floor throughout the congress. The organisers, VOM asbl in collaboration with University of Mons, Vrije Universiteit Brussel, Materia Nova and DECHEMA are pleased to invite you to participate. While industry is seeking support and solutions for corrosion and materials degradation, the academic world is equipped with highly specialised tools and training for studying degradation mechanisms. Hence, this congress will provide an opportunity to reduce the gap between the academic world and industry, especially in the field of corrosion predictions by advanced measuring, modelling and monitoring.

Brussels is glad to welcome EUROCORR's delegates. At the doorstep of the Grand Place, the historic heart of Brussels, EUROCORR will be the occasion for you to discover the charming historical city center surrounded by Gothic, modern and Art Nouveau architecture that colours the city.



Venue SQUARE: Iconic venue in the heart of Brussels with a breathtaking view of the city

Mont des Arts, Brussels



Organisation :



EUROCORR 2021 19-23 September 2021, Budapest, Hungary

Hungary has been granted the privilege of organising the annual EFC Conference, EUROCORR, again in 2021. After a fierce bidding competition in Krakow, the Hungarian Corrosion Society (HUNKOR) received the majority of votes at the EFC Board of Administrators' meeting held on 28 March 2018. This means that Budapest, the beautiful capital city of Hungary, can once again host the most important event of the European Federation of Corrosion.

During the three-year preparation period ahead, HUNKOR's representatives are determined to establish as many new links as possible, including corrosion-related materials science societies operating in central, southern and eastern European regions, from the northerly Baltic States down to the southern Balkan States.

Although these countries, like Hungary, are among the smaller ones in Europe, their economies are developing and they need fresh links and fruitful new co-operations with numerous successful professional scientific and industrial federations to support their further growth.

Since Norway, Russia and Italy represent geographically a crescent around these smaller European states, we would like to invite our former bidding competitors NKF (the Norwegian Corrosion Society), ANTIKOR (the International Scientific & Educational Corrosion Centre, Russia) and AIM (the Associazione Italiana di Metallurgia, Italy) to collaborate with HUNKOR in seeking out and convincing representatives of materials science societies, other corrosion-related institutions, and companies in the target countries to get involved with the European Federation of Corrosion and have a presence at this 2021 EUROCORR.

Working together with a professional conference organizing company (PCO) and with the Diamond Congress Ltd, HUNKOR aims to complete the preparation period successfully and to be a generous host to all corrosionist colleagues working in research institutions, universities or related industries both from Europe and world-wide.



NEWS FROM THE WORLD CORROSION ORGANIZATION (WCO)

Corrosion Awareness Day on 24th April highlights the estimated US\$ 2.5 trillion annual cost of corrosion worldwide (3 to 4% of GDP of industrialised countries) reflecting, in part, the lack of understanding of many decision-makers in industry and government regarding the consequences of corrosion and the critical need to control it.

However, there is the potential to reduce the above-mentioned cost by as much as \$875 billion annually via the appropriate application of existing corrosion abatement technologies, consultation with highly experienced corrosion professionals and harmonisation of standards, along with continuing education and training founded upon the promotion of greater corrosion awareness.

To raise awareness of corrosion and the problems that it causes in relation to various aspects of process safety in the chemical industry, WCO Director General Willi Meier gave a presentation at the 2018 Europe Regional TSC Meeting for CCPS (Centre for Chemical Process Safety) in Paris, entitled "Learning from incidents: Hydrogen Embrittlement".

Attendees learnt of the importance of good material selection, process controls and regular inspection of equipment. When proper safety considerations and controls are established, the risk of hydrogen embrittlement failures is greatly reduced. The presentation was well-received and roused interesting discussion at its conclusion, highlighting the need for closer cooperation between CCPS and the WCO.



Membership to the EFC Working Parties is available as a right to all EFC members belonging to both European and International EFC Member Societies or to EFC Affiliate Members, including companies or universities/research centres. Anyone wishing to join one of the Working Parties listed below should apply to the appropriate Working Party Chairs. Please refer to the EFC website at <http://www.efcweb.org/wp> for full details on Working Party activities or contact EFC Scientific Secretary, Roman Bender (e-mail: roman.bender@dechema.de).

EFC WORKING PARTY INDEX

The EFC currently has twenty-one active Working Parties (WPs) and two Task Forces, listed below, each concerned with a different aspect of the corrosion of metals, alloys and polymer materials. Activities of the EFC Working Parties/Task Forces include: collaborative research and testing programmes; organisation of workshops, seminars and conferences; preparation of state-of-the-art reports, guidelines and proceedings for publication as volumes in the EFC Series and the organisation of sessions at EUROCORR.

EFC WORKING PARTY 1 : CORROSION AND SCALE INHIBITION

Chair : Prof. Günter SCHMITT, IFINKOR (Institute for Maintenance and Corrosion Protection Technologies nfpLtd.), Iserlohn, Germany; E-mail: guenter.schmitt@ifinkor.de

EFC WORKING PARTY 3 : CORROSION BY HOT GASES AND COMBUSTION PRODUCTS

Chair : PD Dr. Mathias GALETZ, DECHEMA-Forschungsinstitut, Frankfurt am Main, Germany; E-mail: mathias.galetz@dechema.de

EFC WORKING PARTY 4 : NUCLEAR CORROSION

Chair : Dr. Stefan RITTER, Paul Scherrer Institut, Nuclear Energy and Safety Research Department, Villigen PSI, Switzerland; E-mail: stefan.ritter@psi.ch

EFC WORKING PARTY 5 : ENVIRONMENT SENSITIVE FRACTURE

Chair : Dr. Krzysztof WOLSKI, Centre SMS _ UMR CNRS 5146, École des Mines de Saint-Etienne, Saint-Etienne, France; E-mail: wolski@emse.fr

EFC WORKING PARTY 6 : SURFACE SCIENCE AND MECHANISMS OF CORROSION AND PROTECTION

Chair : Prof. Philippe MARCUS, École Nationale Supérieure de Chimie de Paris, Paris, France
E-mail: philippe-marcus@chimie-paristech.fr

EFC WORKING PARTY 7 : CORROSION EDUCATION

Chair : Prof. Daniela ZANDER, Gießerei-Institut, RWTH Aachen, Aachen, Germany;
E-mail: D.Zander@gi.rwth-aachen.de

EFC WORKING PARTY 8 : PHYSICAL-CHEMICAL METHODS OF CORROSION TESTING

Chair : Prof. J.M.C. Arjan MOL, Delft University of Technology, Department of Materials Science and Engineering, Delft, The Netherlands; E-mail: j.m.c.mol@tudelft.nl

EFC WORKING PARTY 9 : MARINE CORROSION

Chair : Prof. Philippe REFAIT, Laboratory of Engineering Sciences for Environment (LaSIE), University of La Rochelle, La Rochelle, France; E-mail: prefait@univ-lr.fr

EFC WORKING PARTY 10 : MICROBIAL CORROSION

Chair : Dr. Pierangela CRISTIANI, RSE - Ricerca sul Sistema Energetico S.p.A., Milano, Italy;
E-mail: pierangela.cristiani@rse-web.it

EFC WORKING PARTY 11 : CORROSION OF STEEL IN CONCRETE

Chair : Prof. Michael RAUPACH, RWTH Aachen, Institute for Building Materials Research, Aachen, Germany; E-mail: raupach@ibac.rwth-aachen.de

EFC WORKING PARTY 13 : CORROSION IN OIL AND GAS PRODUCTION

Chair : Mr. Marc WILMS, Shell Projects & Technology, Mechanical, Material & Integrity (MMI), Amsterdam, Netherlands; E-mail: marc.wilms@shell.com

EFC WORKING PARTY 14 : COATINGS

Chair : PD Dr.-Ing. Wolfram FÜRBEETH, DECHEMA-Forschungsinstitut, Frankfurt am Main, Germany; E-mail: wolfram.fuerbeth@dechema.de

EFC WORKING PARTY 15 : CORROSION IN THE REFINERY AND PETROCHEMISTRY INDUSTRY

Chair : Dr. François ROPITAL, IFP Energies nouvelles, Direction Chimie et Physico Chimie Appliquées, Département Electrochimie et Matériaux, Solaize, France; E-mail: francois.ropital@ifpen.fr

EFC WORKING PARTY 16 : CATHODIC PROTECTION

Chair : Mr. Jérôme CROUZILLAC, BAC Corrosion Control, Voisins-le-Bretonneux, France; E-mail: j.crouzillac@bacfrance.com

EFC WORKING PARTY 17: AUTOMOTIVE CORROSION

Chair : Ms. Elizabeth SZALA, R & D - Innovation Centre Duffel, ALERIS ALUMiNUM DUFFEL BVBA, Duffel, Belgium ; E-mail: elizabeth.szala@aleris.com

EFC WORKING PARTY 18 : TRIBOCORROSION

Chair: Dr. Stefano MISCHLER, École Polytechnique Fédérale de Lausanne (EPFL), Tribology and Interface Chemistry Group, Lausanne, Switzerland; E-mail: stefano.mischler@epfl.ch

EFC WORKING PARTY 19 : CORROSION OF POLYMER MATERIALS

Chair : Dr.-Ing. Jürgen HEINEMANN, DIN CERTCO Gesellschaft für Konformitätsbewertung mbH, 12103 Berlin, Germany; E-mail: juergen.heinemann@dincertco.de

EFC WORKING PARTY 20 : CORROSION AND CORROSION PROTECTION OF DRINKING WATER SYSTEMS

Chair : Dr. Johann Wilhelm ERNING, Bundesanstalt für Materialforschung und -prüfung, Berlin, Germany; E-mail: wilhelm.erning@bam.de

EFC WORKING PARTY 21: CORROSION OF ARCHAEOLOGICAL AND HISTORICAL ARTEFACTS

Chair: Dr. Delphine NEFF, Archaeomaterials and Alteration Prediction Laboratory, SIS2M/LAPA CEA/CNRS, CEA Saclay, Gif-sur-Yvette, France ; E-mail: delphine.neff@cea.fr

EFC WORKING PARTY 22 : CORROSION CONTROL IN AEROSPACE

Chair : Mr. Theo HACK, EADS Innovation Works, Munich, Germany ; E-mail: theo.hack@eads.net

EFC WORKING PARTY 23 : CORROSION RELIABILITY OF ELECTRONICS

Chair : Prof. Rajan AMBAT, Technical University of Denmark (DTU), Materials and Surface Engineering, Lyngby, Denmark ; E-mail: ram@mek.dtu.dk

In addition :

EFC TASK FORCE ON CO2-CORROSION IN CCS-APPLICATIONS

Chair: Dr. Ralph BÄSSLER, Bundesanstalt für Materialforschung und -prüfung, Berlin, Germany; E-mail: ralph.baessler@bam.de

EFC TASK FORCE ON ATMOSPHERIC CORROSION

Chair : Dr. Tomáš PROSEK, University of Chemistry and Technology Prague, Department of Metallic Construction Materials, Kralupy nad Vltavou, Czech Republic; E-mail: to-mas.prosek@vscht.cz

EFC CALENDAR

OF FORTHCOMING EVENTS AND COURSES (AS OF JULY 2018)

2018		
DATE/VENUE	CONFERENCE / COURSE	CONTACT
09-13 September Krakow, Poland	EUROCORR 2018 EFC Event No. 429	Local Organiser: Polish Corrosion Society (PSK) Gdansk, Poland E-mail: sekretarz@psk.org.pl - Website: http://www.psk.org.pl Scientific Secretariat: DECHEMA e.V. - E-mail: eurocorr@dechema.de - Website: http://eurocorr.org/
26-28 September 2018 Hatay, Turkey	CORSEM 2018 <i>XV. International Corrosion Symposium</i> EFC Event No. 436	Website: http://www.korozyondernegi.org.tr/
26-28 September 2018 Frankfurt am Main, Germany	EFC Workshop 2018: High Temperature Corrosion under Complex Conditions, Deposits and Salts: Towards Greener Energy EFC Event No. 433	Website: http://dechema.de/en/efcws2018.html
6-7 November 2018 Bremerhaven, Germany	GfKORR annual Conference <i>Corrosion Protection of Offshore Wind Power Plants</i> EFC Event No. 441	Website: http://gfkorr.de/gfkorr_media/JT2018_web.pdf
21-23 November 2018 Vienna, Austria	3rd Metal Additive Manufacturing Conference	Website: http://www.mamc2018.org/
2019		
28-31 January 2019 INSTN, Saclay, France	Winter School «Modelling of Corrosion» EFC Event	Alexandra Fectay -E-mail: alexandra.fectay@uvsq.fr - Website: http://www.mse-chair.org/
24-28 March 2019 Nashville, TN, USA	CORROSION 2019 / NACE <i>Conference and Exhibition</i>	Lesley Martinez - NACE International Headquarters - Houston, Texas 77084, USA E-mail: lesley.martinez@nace.org - Website: http://www.nace.org/
9-13 April 2019 Treviso - Venice, Italy	Aluminium 2019 <i>11th Aluminium Two Thousand World Congress</i>	Interall Srl - E-mail: aluminium2000@interall.it - Website: http://www.aluminium2000.com/
3-5 July 2019 Palermo, Italy	GN CORR 2019 <i>Giornate Nazionali sulla Corrosione e Protezione XIII edizione</i> EFC Event No. 439	Website: http://www.aimnet.it/gncorrosione
7-12 July 2019 Gozd Martuljek, Slovenia	NuCoSS-19 Nuclear Corrosion Summer School 2019 EFC Event No. 440	Website: http://www.meactos.eu/events
4-9 August 2019 Durban, South Africa	ISE Annual Meeting 2019 <i>70th Annual Meeting of the International Society of Electrochemistry</i>	International Society of Electrochemistry - Lausanne, Switzerland Website: http://www.ise-online.org/ise-conferences/next_ISE-meetings.php
9-13 September 2019 Seville, Spain	EUROCORR 2019 EFC Event	Local Organiser: SOCIEMAT - El Escorial, Madrid, Spain E-mail: sociemat1996@gmail.com - Website: http://www.sociemat.es Scientific Secretariat: DECHEMA e.V. E-mail: eurocorr@dechema.de - Website: http://eurocorr.org/
19-21 November 2019 Nancy, France	LTC 2019 <i>7th Int. Workshop on Long-Term Prediction of Corrosion Damage in Nuclear Waste Systems</i> EFC Event No. 443	Organised by D. Féron (CEA), D. Crusset (ANDRA) and CEFRACOR
2020		
15-19 March 2020 Houston, TX, USA	CORROSION 2020 / NACE <i>Conference and Exhibition</i>	Lesley Martinez - NACE International Headquarters - Houston, Texas 77084, USA E-mail: lesley.martinez@nace.org - Website: http://www.nace.org/
30 August 4 September 2020 Belgrade, Serbia	ISE Annual Meeting 2020 <i>71st Annual Meeting of the International Society of Electrochemistry</i>	International Society of Electrochemistry - Lausanne, Switzerland E-mail: events@ise-online.org Website: http://www.ise-online.org/ise-conferences/next_ISE-meetings.php
6-10 September 2020 Brussels, Belgium	EUROCORR 2020 EFC Event	Local organiser: University of Mons, Prof. Marjorie Olivier, marjorie.olivier@umons.ac.be VOM, Ir Veerte Fincken, v.fincken@vom.be Vrije Universiteit Brussel, Prof. Herman Terryn, herman.terryn@vub.be Materia Nova, Dr Mireille Poelman, mireille.poelman@materianova.be Scientific Secretariat: DECHEMA e.V. E-mail: eurocorr@dechema.de - Website: http://eurocorr.org/
2021		
18-22 April 2021 Salt Lake City, UT, USA	CORROSION 2021 / NACE <i>Conference and Exhibition</i>	Lesley Martinez - NACE International Headquarters Houston, Texas 77084, USA - E-mail: lesley.martinez@nace.org - Website: http://www.nace.org/
29 August- 3 September 2021 Jeju Island, Korea	ISE Meeting 2021 <i>72nd Annual Meeting of the International Society of Electrochemistry</i>	International Society of Electrochemistry - Lausanne, Switzerland E-mail: events@ise-online.org Website: http://www.ise-online.org/ise-conferences/next_ISE-meetings.php
19-23 September 2021 Budapest, Hungary	EUROCORR 2021 EFC Event	Local organiser: Hungarian Corrosion Society (HUNKOR) Scientific Secretariat: DECHEMA e.V. - E-mail: eurocorr@dechema.de - Website: http://eurocorr.org/

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